

SEVERAL POSITIONS: Subcluster ROOTS of Socio-Environmental Hazards

The new Cluster ROOTS – Social, Environmental, and Cultural Connectivity in Past Societies in the frame of the German Excellence Initiative explores social, environmental, and cultural processes that have substantially shaped past human development (and which are still active today). Research is organized in six research units (i.e. subclusters) covering six foci: (1) Environmental hazards and impacts; (2) Dietary intake and disease; (3) Knowledge production, technology, and innovation; (4) Population agglomeration and urbanisation; (5) Social differentiation and inequalities; and (6) Conflict and conciliation. The ROOTS ‘Reflective Turn’ will enable cross-disciplinary dialogue and enquiries within and between research foci, providing an overarching theoretical frame.

The Research Associates and Doctoral positions participate in the ROOTS Young Academy. The ROOTS Young Academy brings together young experts from an array of disciplines, which support ROOTS research with innovative research ideas. The Young Academy provides young researchers with excellent conditions for a successful career and personal development.

The subcluster “Environmental hazards and impacts” invites applications for the following positions to begin as early as possible:

a) One Research Associate Position (TVL 13)

Research associate position in Landscape Archaeology of the Wadden Seas

The Wadden Sea area at the west coast of Schleswig-Holstein is a UNESCO endorsed historical landscape. Originally, a prosperous medieval cultural landscape, it has been destroyed and reshaped in a sequence of extreme storm and flood events since the medieval, making it an exemplary case of past and on-going socio-environmental interaction. The postdoc position is for conducting fundamental geophysical and archaeological field research aiming at unravelling the paleo-geographic and cultural development of the Wadden Seas, the impact of hazards and the role of human actions and reactions. Starting with the UNESCO World Heritage area of Schleswig-Holstein the research area may be widened in the course of the project. The position has the potential of initiating and coordinating a national or international collaborative interdisciplinary research effort under the leadership of ROOTS. The successful candidate is expected to have a strong background in interdisciplinary research with a focus on geophysics and archaeology. The position will be embedded in a network of working groups providing, inter alia, geophysical, archaeological, geoarchaeologic and historic expertise.

Requested qualifications: For the intended purpose we invite candidates with an excellent PhD in the above listed fields of research scientists with highly interdisciplinary profiles to conduct research on pertinent topics as they relate to the broader themes of ROOTS (further information can be found at www.cluster-roots.uni-kiel.de/en). Within the broad interdisciplinary frame of ROOTS, the position holders will be hosted by the ROOTS Young Academy, which offers endowment with research funds at own disposal, access to high-end infrastructures, as well as teaching opportunity. The Research Associates will be affiliated with the Johanna Mestorf Academy at Kiel University (www.jma.uni-kiel.de).

Salary will be commensurate at level TV-L 13 of the federal wage agreement scheme (Tarifvertrag der Länder). It is a fulltime-position (currently 38,7 h/week). The initial duration of this post is for 3 years,

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renewable up to 6 years total, pending positive evaluation. The Position is endowed with research and investment funds.

Contact:

Ingmar Unkel (Speaker of ROOTS Subcluster "Hazards", iunkel@ecology.uni-kiel.de),
Mara Weinelt (Speaker of ROOTS Young Academy, mweinelt@gshdl.uni-kiel.de),
Wolfgang Rabbel (project initiator, wolfgang.rabbel@ifg.uni-kiel.de)

b) Four Doctoral Positions

01 PhD Doctoral Position: Testing the Neolithic Plant Invasion Hypothesis (NPIH)

Profile: Biology, plant ecology, biodiversity, invasion ecology

European plants invade temperate grasslands globally because they are preadapted after millennia of exposure to pastoralism and cultivation dating to the Neolithic era. The Neolithic Plant Invasion Hypothesis (NPIH) implies that preadaptation helps to maximize performance of invasive plant species relative to native species lacking this adaptive history. Invasions and agricultural-based perturbations are closely connected. Given that many European grasslands are creations of human activity from the past, current invasions by these floras may simply represent the continuation of processes dating to the Neolithic.

Global plant invaders originating from Europe and having ancestral ranges, e.g., in Asia Minor, thereby offer a suitable study system to test the roles of pre-adaptation, plasticity and recent evolution for explaining actual invasion success. Using surveys and multispecies experiments with individuals originating from different regions of the species' ranges, we will test NPIH based predictions and study the processes behind patterns of global plant invasion. The work involves planning, implementation, analysis and publication of research, which should contribute to the completion of a PhD degree.

The research will be carried out at the Institute for Ecosystem Research, Geobotany (Prof. Dr. Alexandra Erfmeier) and is meant to be conducted as a paired approach operated with PhD position 02PhD.

Required qualifications: The successful candidate holds a degree (M.Sc. or Diploma) in Biology or a related field with a focus on plant ecology or biodiversity. Experience with ecological fieldwork, common garden experiments and quantification of plant functional traits are advantageous. A good knowledge of Central European flora and scientific skills such as data analysis and manuscript preparation must be evident (e.g., through the Master thesis). Good methodological competence in statistics using R is required. She/he is motivated to conduct extensive fieldwork and collect data in numerous countries.

We are looking for a highly motivated person with a keen interest in ecology and evolution.

Contact: Prof. Dr. Alexandra Erfmeier (Tel.: +49 431 880 1010, aerfmeier@ecology.uni-kiel.de)

02 PhD Doctoral Position: Hazards of Neobiota in the Anthropocene

Profile: Environmental Philosophy

The PhD position will launch a research project that analyses the hazards and of neobiota from an historical and an environmental ethics perspective. The research perspective will include recent debates on the

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Anthropocene and its origins. Ideally, it should address topics as ecological damage, neobiota and diets, and biological invasions.

The Anthropocene will be dominated by globalized man-nature-interactions. With high likeliness, neobiota will spread worldwide. Drivers are international trade, climate change, agriculture, and interventionistic nature conservation measures (“assisted evolution”). Such neobiota are often conceived as being “alien invasive species” imposing different risks to endemic or indigenous species and ecosystems. There is ongoing debate on neobiota within nature conservation and environmental ethics. There are reasons to assume that neobiota, especially neophytes, are not a recent phenomenon, but can be identified already in Neolithic and ancient times. Historical research on neobiota might shed fresh light on the current debate. Thus, the PhD project should critically compare the recent debate on neobiota with historical realities of neobiota dispersal.

The doctoral student shall analyse the current discourse on neobiota in environmental ethics via discourse analysis. It also researches the historical dimension of neobiota since the Neolithic. It shall analyse the research on Neolithic neobiota dispersal by a comprehensive literature review. It shall compare past and present neobiota dispersal according to defined criteria. It shall contextualize the neobiota discourse within the horizon of the Anthropocene.

The ideal candidate holds a relevant degree (Master or Diploma) should conjoin competences in environmental ethics, philosophy, history, and biology. He or she should be able to perform his research in a highly interdisciplinary research cluster. He should take interest in the Reflective Turn Cluster of Roots.

Contact: Prof. Dr. Konrad Ott (ott@philsem.uni-kiel.de)

03 PhD Doctoral Position: Pollution and contamination in geoarchaeological environments

Profile: Environmental Sciences, Geochemistry, Ecology

Ever since people concentrate in settlements and the duration of settlements increased since Prehistoric times anthropogenic pollution and contamination have constituted socio-environmental hazards with impact on water, atmosphere and soil.

The successful candidate shall conduct research on the extent of pollution, its impact on earlier societies, as well as on their coping strategies. The focus of research interest can span from Neolithic to Medieval times, pending on the candidates research interest.

Kiel University and the cluster of excellence “ROOTS” assembles broad environmental and archaeological expertise and excellent infrastructure to study early pollution/ contamination in a variety of archaeo-environmental archives and settings, including stable isotope, trace metal and biomarker approaches, and the position is attached to the subcluster ROOTS of socio-environmental hazards, the cluster moreover provides cooperation chances with working groups in Urban ROOTS, Dietary ROOTS and Social Inequality.

Required qualifications: The successful candidate holds an excellent degree (MSc or Diploma) in geosciences, geochemistry, environmental sciences, ecology, geobotany, or isotope research. She/He has a genuine interest in palaeoenvironmental change and the impact of past societies on the environment.

Contact: Walter Dörfler (wdoerfler@ufg.uni-kiel.de), Mara Weinelt (mweinelt@roots.uni-kiel.de)

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04 PhD Doctoral Position: Identification of hazards in paleoenvironmental archives

Profile: Micromorphology, Palynology, Dendro-climatological Studies

The PhD position aims at a multi-disciplinary study of laminated lake sediments and tree ring records and comparison with archaeological and historical data in Europe. The natural archives will be scanned for signals of extreme events like series of drought or frost or volcanic eruptions that may have triggered hazards with consequences for human societies. The method spectrum to be applied includes micro-morphological studies on thin slides from lake sediments, palynology, Micro-XRF and dendro-climatological studies – done partly by the PhD candidate and supported by involved working groups.

Required qualifications: The candidate should provide a strong knowledge in palaeo-environmental methods with an excellent master in Biology, Geography or Geology and an elaborated interest in human environmental interdependencies.

Contact: Walter Dörfler (wdoerfler@ufg.uni-kiel.de)

We are seeking highly qualified and motivated doctoral fellows to conduct high-quality interdisciplinary research in the frame of ROOTS. The graduate program is jointly offered by academics of the Humanities, Mathematics and Natural Sciences, and Life Sciences. The Doctoral Candidates will be hosted by the ROOTS Young Academy and they will be affiliated with the Johanna Mestorf Academy at Kiel University (www.jma.uni-kiel.de). Innovative research ideas are supported by the extensive infrastructure and Graduate Centre at Kiel University. All position holders are eligible to apply for research funds. Supervision will be provided generally at an interfaculty level by supervisors from two different disciplines.

Eligible candidates must hold an outstanding university degree (MA, MSc or equivalent) in a field relevant to the interdisciplinary theme of ROOTS (further information can be found at <https://www.jma.uni-kiel.de/en/roots>). The Cluster welcomes applications from across disciplines that focus on the study of Social, Environmental, and Cultural Connectivity in Past Societies.

Salary will be at 65% (currently 25,16 h/week) of level TV-L 13 of the federal wage agreement scheme (Tarifvertrag der Länder). The term is fixed for a period of 3,5 years (42 months).

Kiel University is an equal opportunity employer and is committed to increasing the proportion of female scientists in research and teaching, and strongly encourages female applicants. Women will be given preference in case of equal suitability, competence, and professional performance. The University is also committed to the employment of disabled person, and such individuals will be accorded preference if suitable.

Applications by people with a migration background are particularly welcome.

For the **Research Associate Positions**, please send the following documents **as a single .pdf document**:

- a cover letter
- CV (including list of publications)
- the proposed research agenda no longer than 2500 words, including a brief summary, state of the art, a concise project description, and a work schedule

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- a short statement describing your proposed research contribution with regards to the overall aims of ROOTS
- the names of two references with contact information
- a copy (in .pdf format) of your PhD dissertation
- certificates of academic degrees, including proof of completion of the doctorate

All documents must be submitted in English, with the exception of the PhD thesis.

For the **Doctoral Positions**, please send the following documents **as a single .pdf document**:

- a cover letter
- CV (including list of publications)
- the proposed doctoral project outline no longer than 1500 words, including a brief summary, state of the art, a concise project description, and a work schedule
- the names of two references with contact information
- a copy (in .pdf format) of your master-thesis or proof of equivalent qualification
- certificates of academic degrees

All documents must be submitted in English, with the exception of the copy of the master-thesis.

Please address your application until **4th October 2019** to:

Search Committee
Speaker Prof. Dr. Johannes Müller
Cluster of Excellence ROOTS
Kiel University
Leibnizstraße 3
24118 Kiel
Germany

via e-mail
application@roots.uni-kiel.de

For additional information, please contact:

Ingmar Unkel (Speaker of ROOTS Subcluster "Hazards", iunkel@ecology.uni-kiel.de)

Mara Weinelt (Speaker of ROOTS Young Academy, mweinelt@gshdl.uni-kiel.de)